

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-25 are pending in the application, with claims 1, 12, and 21 being the independent claims. New claims 22-25 are sought to be added. These changes introduce no new matter and their entry is respectfully requested.

Based on the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 1-7, 10-17, 20, and 21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2003/0200439 to Moskowitz in view of U.S. Patent 6,330,672 to Shur. Applicants respectfully traverse.

Independent claim 1 recites, among other features, “generating a **plurality of watermarks**, each of the plurality of watermarks comprising a **respective index number** and a respective portion of the stream of watermark bits.”

In rejecting claim 1, the Examiner alleges that Moskowitz discloses a method, which includes “generating a plurality of watermarks, each of the plurality of watermarks comprising a respective index number and a respective portion of watermark bits” and “inserting the plurality of watermarks into each header of outgoing packets.” Office Action, page 4, line 14 – page 5, line 2. The Examiner concedes that Moskowitz does not teach that each of the plurality of watermarks

comprises a respective index number and that it is inserted into a respective header of an outgoing packet. However, the Examiner alleges that this feature is obvious in view of Shur, which according to the Examiner teaches “putting different portions of the watermark string in different parts of the data, and defining an index, which identifies which part of the data stream is affected by the addition or injection of the watermark stream.” Office Action, page 5, lines 18-21. For at least the reasons below, Applicants respectfully traverse.

Contrary to the Examiner’s allegation, Moskowitz does not teach or suggest “generating a **plurality of watermarks**,” as recited in claim 1. Indeed, Moskowitz discloses a method for transmitting streams of data, which includes “generating a **packet watermark** associated with the stream of data” and “combining **the packet watermark with each of the plurality of packets**” of the data stream. Moskowitz, Abstract. Furthermore, Moskowitz appears to teach away from generating a plurality of watermarks by indicating that “[i]t is preferable, however, that the same watermark be used within each packet of the stream.” Moskowitz, col. [0034].

Similarly, Shur does not teach or suggest “generating a **plurality of watermarks**.” In fact, Shur is directed to a method for watermarking a digital information signal, which includes inserting a watermark into the information signal such that it is distributed throughout the information signal, thereby making the watermark more difficult to locate and remove by a digital pirate. However, nowhere does Shur teach or suggest using more than a single watermark in the information signal.

Further, since neither Moskowitz nor Shur teaches or suggests “generating a plurality of watermarks,” neither Moskowitz nor Shur teaches or suggests that each of

the plurality of watermarks “comprises a respective index number,” as recited in claim 1. Indeed, since a single watermark is used in Moskowitz and Shur, an index number to index the watermark within the stream of packets is not needed and is thus not used.

Independent claim 1 further recites, among other features, “inserting the plurality of watermarks into **respective headers of a plurality of outgoing packets.**”

In rejecting this feature of claim 1, the Examiner relies on Shur to suggest that Shur’s method of inserting a watermark into an information signal is equivalent to inserting distinct watermarks into respective outgoing packets. Applicants respectfully disagree.

As noted above, Shur does not teach or suggest inserting **a plurality of watermarks**. Further, Shur’s method is not concerned with watermarking a packetized data stream for authentication purposes. Rather, Shur is directed at watermarking an information signal for piracy protection purposes. As such, as described by FIG. 1(a) and the corresponding text of Shur, Shur’s method operates on an information signal in its entirety and not on multiple packets generated therefrom. Indeed, Shur never refers to or suggests watermarking a stream of packets; and Shur’s method solely describes steps that occur prior to packetization in a transmission chain. For example, Shur’s process illustrated in FIG. 1(b) includes, among other steps, low-pass filtering, analog-to-digital conversion, and lastly entropy encoding, all of which are steps that occur prior to packetization in a transmission chain.

In view of the above, if Shur’s method is used to watermark an information signal to be transmitted in a packet stream, it is not guaranteed when the watermarked signal is subsequently packetized that each packet in the packet stream will include a

watermark or a portion thereof. This is because Shur's method operates by inserting portions of the watermark at different locations of the information signal according to spectral coefficients of contiguous time segments of the information signal. As such, when content in a given time segment cannot be removed without perceptible quality loss (i.e., the spectral coefficient of the time segment is higher than the perception threshold function), no watermarking bits will be inserted in said time segment. See Shur, col. 7 line 56 - col. 8, line 8.

Accordingly, Shur's method of distributing a watermark throughout an information signal is not equivalent to nor makes obvious the above feature of claim 1, which includes inserting a distinct watermark into the header of **each** outgoing packet of a packet stream.

For at least the reasons above, claim 1 is patentable over Moskowitz and Shur. Reconsideration and withdrawal of the rejection of claim 1 and of claims 2-11 that depend therefrom is respectfully requested.

Independent claims 12 and 21 recites similar features as discussed above with respect to claim 1. For at least the reasons provided above with respect to claim 1, claims 12 and 21 are patentable over Moskowitz and Shur. Reconsideration and withdrawal of the rejection of claims 12-17 and 20-21 is respectfully requested.

Claims 8, 9, 18, and 19 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Moskowitz in view of Shur, and further in view of Examiner Official Notice.

Claims 8, 9, 18, and 19 depend from one of independent claims 1 and 12.

Claims 1 and 12 are distinguished above over Moskowitz and Shur. The Examiner's Official Notice does not overcome the deficiencies of Moskowitz and Shur as discussed above. Accordingly, claims 8, 9, 18, and 19 are patentable over Moskowitz, Shur, and the Examiner's Official Notice.

Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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